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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,182	05/20/2004	Takashi Okada	253303US0	7254
22850	7590	05/23/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER	
			CHUO, TONY SHENG HSIANG	
			ART UNIT	PAPER NUMBER
			1745	
			NOTIFICATION DATE	DELIVERY MODE
			05/23/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/849,182

Applicant(s)

OKADA ET AL.

Examiner

Tony Chuo

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. Claims 1 and 3-5 are currently pending. The previously stated 112 rejection of claims 4 and 5 is withdrawn. The amended claims do overcome the previously stated 102/103 rejection. However, upon further consideration, claims 1 and 3 are rejected under the following new 102 rejection.

### ***Specification***

2. The disclosure is objected to because of the following informalities: on page 16, lines 7-8, the phrase "n is synonymous with n in the general formula (B-1)" should be changed to "n is synonymous with p in the general formula (B-1)". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(a) (e) as being anticipated by Asano et al (US 2002/0164513).

The Asano reference discloses a membrane electrode assembly for a fuel cell comprising: an oxygen electrode "2" and a fuel electrode "3" on both sides of a polymer electrolyte membrane "1"; separator plates "6"; oxygen paths "6a"; and fuel paths "6b"; wherein the polymer electrolyte membrane comprises a sulfonated arylene copolymer obtained by introducing a sulfonic group into a side chain of a copolymer comprising 30-95 mol% of a first aromatic monomer unit represented by the chemical formula (1), and 70-5 mol% of a second aromatic monomer unit represented by the chemical formula (2) (See paragraphs [0018],[0019],[0020],[0021],[0022]). The chemical formula (1) is equivalent to the general formula (A) of the present application. The chemical formula (2), wherein a is equal to 2, is equivalent to the general formula (B-1) of the present application, wherein p is equal to 1 and T represents (C-2).

Examiner's note: The limitation "for a direct methanol type fuel cell" is not given patentable weight because a recitation of intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

#### ***Allowable Subject Matter***

5. Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Asano reference discloses a membrane electrode assembly for a fuel cell comprising: an oxygen electrode "2" and a

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fuel electrode "3" on both sides of a polymer electrolyte membrane "1"; separator plates "6"; oxygen paths "6a"; and fuel paths "6b"; wherein the polymer electrolyte membrane comprises a sulfonated arylene copolymer obtained by introducing a sulfonic group into a side chain of a copolymer comprising 30-95 mol% of a first aromatic monomer unit represented by the chemical formula (1), and 70-5 mol% of a second aromatic monomer unit represented by the chemical formula (2). However, Asano et al does not expressly teach a proton conductive membrane comprising a polymer containing a repeating constitutional unit represented by general formula (B-1) or (B-2), wherein p represents an integer from 10 to 80.

### ***Response to Arguments***

6. Applicant's arguments, see Remarks, filed 5/8/07, with respect to the rejection(s) of claim(s) 1 and 3 under 35 USC 102/103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Asano et al (US 2002/0164513).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Chuo whose telephone number is (571) 272-0717. The examiner can normally be reached on M-F, 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC

  
JONATHAN CREPEAU  
PRIMARY EXAMINER